U/WIN®

Licensed from the originators of the Unix operating system.

U/WIN makes Microsoft NT the best Unix like platform! U/WIN includes a set of utilities that let Unix applications run in the native Win32 mode of Windows NT. Corporate IS departments can retain their investments in high-end enterprise-wide Unix applications while standardizing on the Windows NT operating system. U/WIN also offers administrative features currently available in Unix environments, including user and group management utilities.

The U/WIN product includes the POSIX 1003.2 conforming KornShell commands and utilities, as licensed from the AT&T Corporation. The base product includes the telnet daemon for ease of integration into your heterogeneous computing Unix and Windows computing environment. Originally developed by David Korn, Glenn Fowler, and Phong Vo, all of AT&T research, the U/WIN product is now available direct from Global Technologies Ltd., Inc., an AT&T Value Added Reseller.

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Features

- **KornShell.** U/WIN includes the latest release of the KornShell, direct from AT&T.

- **POSIX.2 Conforming Commands**. There are 150+ POSIX 1003.2 conforming shell commands and utilities included with U/WIN.

- **Telnetd.** You can telnet between Unix and Windows, and between Windows and Unix. Release 1.3 of U/WIN also includes the rlogin command.

- **File Links.** U/WIN supports both hard links and symbolic links.

- **Sockets.** The BSD sockets are provided, mapped to Winsock.

- **Interprocess Communications.** U/WIN supports message queues, pipes (both named and unnamed), shared memory, semaphores, and memory mapped files!

- **Unix Scripting Languages.** U/WIN includes the latest release of KornShell as the default shell. The awk, perl, and sed utilities are also available.

- **Full Windows NT Integration.** U/WIN takes advantage of the Windows NT security model and also integrates with the Windows NT file system. You can even exec Win32 programs direct from U/WIN.

- **Full tty support.** U/WIN support full tty semantics mapped to console windows. Even pseudo terminals are supported. U/WIN also includes complete termios support and even curses.

Who Needs U/WIN?

- Internet developers and ISPs who need UNIX tools and real UNIX KornShell portability.

- Major Corporate IT shops that want to maintain a "write once – deploy many" policy for applications across Unix and Windows NT.

- Corporate desktop sites hosting both Unix and Windows applications on a single platform.

- System administrators who need remote login access using the industry standard KornShell

- Independent Software Vendors that want to use one workstation for developing both Windows and UNIX applications.

- Developers wanting to host multiple user character based and graphical applications on Windows NT.

- Customers needing to port or develop Unix style background daemon applications

- All customers who want to capitalize on their UNIX investment as they move to Windows NT.

- Corporate IT shops maintaining a heterogeneous computing environment.

- Independent Software Vendors seeking to maximize on development expenses by offering applications on Unix and Windows operating systems.

The U/WIN Software Development Kit

The library functions are implemented as functions exported in a DLL (POSIX.DLL). Programs linked with POSIX.DLL run under the WIN32 subsystem instead of the POSIX subsystem. Thus programs can make UNIX library calls or any other WIN32 call as required. A cc command is provided to compile and link programs for U/WIN on Windows NT. The cc command calls either the Microsoft Visual C/C++ 2.X compiler, the Visual C/C++ 4.X compiler, the Visual C/C++ 5.0 compiler, or the Microsoft Tools C compiler to perform the actual compilation and linking.

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What's New In U/WIN?

- The logical name `/sys` has been added as a name for the system directory.

- Thanks to Glenn Fowler, the commands `troff2html` and `html2rtf` have been added to convert troff documents to html, and html files into rtf format to generate Microsoft help files.

- The `tput` command has been added.

- The `ftp` command has been added

- A version of `rlogind` has been added.

- A version of `ldd` (lists the dll's loaded at startup by an executable) has been added.

- The console window has better support for background colors.

- A `shutdown` program was written so that you can shutdown and optionally reboot the system, even from a telnet session.

- Some support for UNC file naming has been added.

- The `uudecode` program now supports binhex in addition to several other formats. `uudecode -l` lists the formats.

- Thebase environment now includes
  - Perl 5.003
  - Tclsh 7.6
  - GNU Groff 1.10
  - Samba (Beta Release)

Bug Fixes for Version 1.3 Utilities and runtime

- Symbolic links to directories wasn't working and has been fixed.

- A problem that could causes programs to fail in startup or at exit has been fixed.

- The `stty` program no longer gets an access violation when you specify -xxx, where xxx is not a valid option as the first argument.

- The `/etc/profile` now unsets variables `TMP` and

TMPDIR to protect against these variables having non-UNIX style pathnames.

- A bug which could cause an access violation in the child process of a fork() on Windows NT when large arrays (>4K) were declared as automatic variables has been fixed.
- A bug that could cause an access violation in tar/cpio/pax has been fixed.
- A bug in sed with both s and w specified has been fixed.
- The nocrnl command didn't close files after each file and could run out of file descriptor if called with a long list.
- A bug in the grep family that could cause the last line from the -v option not to print has been fixed.
- A bug which caused ln to fail for users other than Administrator has been fixed.
- Files created by NT programs when run under UWIN as Administrator now are owned by Administrator rather than Administrators.
- A bug in sockets that could cause write data to be lost has been fixed.
- The vi command now processes options given on the command line correctly.
- The vt100 emulator was computing screen sizes incorrectly when the buffer size was larger than the screen size.
- diff3 wasn't working in Version 1.2 and should now be fixed.
- cp without arguments did not generate an error.
- sort was modified to use much less memory for small files. In addition a bug when reading from the terminal has been fixed.
- Three shell bugs were reported and fixed.

Bug Fixes for Version 1.3 Development Kit

- The compiler, ar, and nmake were modified so that they correctly handle spaces in the pathname for the tools.
- The files <signal.h> and <sys/socket.h> have been modified to work with C++.
- The macro NBBY was defined incorrectly in <sys/param.h>
- The function getdtablesize() was misnamed getdbtablesize() and has been corrected.
- The st_size field returned by lstat() was 4 bytes to little.
- A bug in fork() which occurred when the child process forked again has been fixed.
- The include file <ast_common.h>, which is included by several other include files, no longer contains the symbol NIL.
- A bug in getenv() which could cause the wrong value to be returned when two environment variable names differed only in the last character has been fixed.
- vfork() has been fixed so that exiting in the child works. In addition, a bug which caused file descriptors to be closed in the child has been fixed.
- A bug in link() which caused a failure when two files on the same drive are specified with drive names in different cases, (/c and /C) has been fixed.

Process control and management:

While processes can be created using the fork() function, U/WIN includes a spawn family of functions that combines the functionality of fork/exec for efficiency. With the exec family of functions, an existing process can be overlaid with another process. Each process has a unique process id and each process belongs to a process group. The vfork() function is also an efficient way to create processes.

Unix Signal Semantics

Nearly all of the UNIX signals are provided including job control signals so that KornShell can stop and restart jobs. A process can catch, block or ignore signals. Signals can be sent to a process or to process groups.

PACKAGING AND REQUIREMENTS

- **U/WIN** Base Environment. This core product provides the base environment including the AT&T KornShell and 150+ POSIX conforming shell commands and utilities. The telnet daemon is also included as a component of the base environment.

U/WIN Base System Requirements

- Intel x86 Pentium, Pentium Pro, and compatible systems.
- Microsoft Windows NT 3.51 or higher.
- Microsoft Visual C++ 4.0 or higher (for the SDK).
- 15-70 MB of available hard-disk space.
- Windows NT supported CD-ROM drive and mouse.

U/WIN SDK System Requirements

- Intel x86 Pentium, Pentium Pro, and compatible systems.
- Microsoft Windows NT 3.51 or higher.
- Microsoft Visual C++ 4.0 or higher (for the SDK).
- 15-70 MB of available hard-disk space.
- Windows NT supported CD-ROM drive and mouse.

Availability

U/WIN Release 1.3.3 is now available and shipping on CD-ROM.

Pricing:

Windows NT

U/WIN Base	US$199
U/WIN SDK	US$449
U/WIN X11 Server	US$389 (4Q97)
U/WIN Network Utilities	US$299 (1Q98)

Windows 95

U/WIN Base	US$119
U/WIN SDK	US$225
U/WIN X11 Server	US$309 (4Q97)
U/WIN Network Utilities	US$219 (1Q98)

Need More Info?

For the latest information on U/WIN, please visit the U/WIN web site at:

> http://www.gtlinc.com/products/uwin

Contributions and Authorship

U/WIN is the resulting effort of David Korn's research into migrating Unix to Windows NT. Many others within AT&T Research have also contributed including Glenn Fowler and Phong Vo. The U/WIN source code is owned by the AT&T Corporation and licensed to Global Technologies Ltd., Inc. for commercial resale and support.

Trial Versions

As of Sunday, August 10, 1997, a non-commercial version of U/WIN can be downloaded from the AT&T Internet site at: http://www.research.att.com/sw/tools/uwin   Please read their license agreement carefully.

The U/WIN Base Environment and the U/WIN SDK are licensed per user. When installing onto a server, each client utilizing the U/WIN product must have a valid license. Global Technologies Ltd., Inc. provides a sliding scale for each additional license you purchase.

Part #	Description	Platform	Qty	Price Each
010101	U/WIN 1.3 Base	WinNT	1	199
010102	U/WIN 1.3 Base	Win95	1	99
010103	U/WIN 1.3 Base, Level A license (2-49)	Win95	1	94.05
010104	U/WIN 1.3 Base, Level B license (50-99)	Win95	1	89.10
010105	U/WIN 1.3 Base, Level C license (100-149)	Win95	1	84.15
010106	U/WIN 1.3 Base, Level D license (150-199)	Win95	1	79.20
010107	U/WIN 1.3 Base, Level E license (200-255)	Win95	1	74.25
010108	U/WIN 1.3 Base, Level A license (2-49)	WinNT	1	189.05
010109	U/WIN 1.3 Base, Level B license (50-99)	WinNT	1	179.10
010110	U/WIN 1.3 Base, Level C license (100-149)	WinNT	1	169.15
010111	U/WIN 1.3 Base, Level D license (150-199)	WinNT	1	159.20
010112	U/WIN 1.3 Base, Level E license (200-255)	WinNT	1	149.25

Part #	Description	Platform	Qty	Price Each
010201	U/WIN 1.3 SDK	WinNT	1	499
010202	U/WIN 1.3 SDK	Win95	1	299
010203	U/WIN 1.3 SDK, Level A license (2-49)	Win95	1	149.50
010204	U/WIN 1.3 SDK, Level B license (50-99)	Win95	1	134.55
010205	U/WIN 1.3 SDK, Level C license (100-149)	Win95	1	119.60
010206	U/WIN 1.3 SDK, Level D license (150-199)	Win95	1	104.65
010207	U/WIN 1.3 SDK, Level E license (200-2559)	Win95	1	89.70
010208	U/WIN 1.3 SDK, Level A license (2-49)	WinNT	1	249.50
010209	U/WIN 1.3 SDK, Level B license (50-99)	WinNT	1	224.55
010210	U/WIN 1.3 SDK, Level C license (100-149)	WinNT	1	199.60
010211	U/WIN 1.3 SDK, Level D license (150-199)	WinNT	1	174.65
010212	U/WIN 1.3 SDK, Level E license (200-255)	WinNT	1	149.70

If you have a question about a Global Technologies Ltd., Inc. product, look in the Systems Guide or consult online Help. You can also find late-breaking updates and technical information in the Readme file that came with your product disks or CD. In the United States, the following support services are available:

Information Services

Visit our web site at http://www.gtlinc.com and follow the links to the E-Support Center. Here you will find a wealth of technical information on our products. This site is specifically designed with the developer community in mind.

Standard Support

Global Technologies Ltd., Inc. provides one no-charge telephone support incident for the current version of the product. Call 609-722-0906, 8AM-5:30PM EST, Monday through Friday, excluding holidays. Please have your product identification number ready.

Priority Support

Priority pay per incident option provides priority telephone access to Global Technologies Ltd., Inc. support engineers. In the United States and in Canada, call 609-722-0906; US$195 per incident, billed to your VISA, MasterCard, or American Express card.

Consulting Services

Global Technologies Ltd., Inc. allows you to schedule consultations on supporting and using your Global Technologies Ltd., Inc. products. Your call gives you telephone access (charged per hour) to technical personnel who can provide assistance when your support consulting requirements exceed the boundaries of your existing Global Technologies Ltd., Inc. support. US$195/hour (minimum 1 hour). Call 609-722-0906.